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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,625	02/11/2002	Joseph R. Lakowicz	UMARY1	4325

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EXAMINER

CHAKRABARTI, ARUN K 8

ART UNIT	PAPER NUMBER
1634	8

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <b>10/073,625</b>	Applicant(s) <b>Lakowicz</b>
	Examiner <b>Arun Chakrabarti</b>	Art Unit <b>1634</b>
		
<b>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</b>		
<b>Period for Reply</b> A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.		
<ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>		
<b>Status</b> <p>1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>Feb 11, 2002</u></p> <p>2a) <input type="checkbox"/> This action is FINAL.      2b) <input checked="" type="checkbox"/> This action is non-final.</p> <p>3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i>, 1935 C.D. 11; 453 O.G. 213.</p>		
<b>Disposition of Claims</b> <p>4) <input checked="" type="checkbox"/> Claim(s) <u>1-27</u> is/are pending in the application.</p> <p>4a) Of the above, claim(s) <u>15-25</u> is/are withdrawn from consideration.</p> <p>5) <input type="checkbox"/> Claim(s) _____ is/are allowed.</p> <p>6) <input checked="" type="checkbox"/> Claim(s) <u>1-14, 26, and 27</u> is/are rejected.</p> <p>7) <input type="checkbox"/> Claim(s) _____ is/are objected to.</p> <p>8) <input type="checkbox"/> Claims _____ are subject to restriction and/or election requirement.</p>		
<b>Application Papers</b> <p>9) <input type="checkbox"/> The specification is objected to by the Examiner.</p> <p>10) <input type="checkbox"/> The drawing(s) filed on _____ is/are a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).</p> <p>11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action.</p> <p>12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.</p>		
<b>Priority under 35 U.S.C. §§ 119 and 120</b> <p>13) <input type="checkbox"/> Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</p> <p>a) <input type="checkbox"/> All b) <input type="checkbox"/> Some* c) <input type="checkbox"/> None of:</p> <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Certified copies of the priority documents have been received.</li> <li>2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.</li> <li>3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> </ol> <p>*See the attached detailed Office action for a list of the certified copies not received.</p>		
<p>14) <input type="checkbox"/> Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).</p> <p>a) <input type="checkbox"/> The translation of the foreign language provisional application has been received.</p> <p>15) <input type="checkbox"/> Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.</p>		
<b>Attachment(s)</b> <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). <u>4, 5, 6</u></p> <p>4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input checked="" type="checkbox"/> Other: <i>Detailed Action</i></p>		

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-14, and 26-27, drawn to biomolecules and metals detectable by electromagnetic radiation, classified in class 250, subclass 462.1.
  - II. Claims 15-25, drawn to method of detection of biomolecules by electromagnetic radiation, classified in class 422, subclass 82.01.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Groups I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, method of detection of biomolecules of Group II can be practiced by the composition of Group I or can be practiced by solution phase hybridization or immunoassays or mass spectrometry.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with Jacqueline Haley on January 28, 2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-14 and 26-27. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-14, 26, and 27 are rejected under 35 U.S.C. 102 (b) as being anticipated by Schalkhammer et al. (U.S. Patent 5,866,433) (February 2, 1999).

Schalkammer et al. teaches a composition of matter comprising: a biomolecule in combination with a metal particle, wherein the metal particle and the biomolecule are positioned at a distance apart sufficient to adjust intrinsic emission of electromagnetic radiation from the biomolecule in response to an amount of exciting electromagnetic radiation (Abstract, Figures 1-4 and Column 1, lines 7-25, and Column 3, line 4 to Column 5, line 4 and Claims 3-18).

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Schalkhammer et al. teaches a composition, wherein the biomolecule comprises an oligonucleotide, nucleotide or nucleoside, purine or pyrimidine, and a nucleic acid (Column 3, lines 63-67 and claim 16).

Schalkhammer et al. teaches a composition, wherein the biomolecule comprises a protein and an amino acid (Column 3, lines 63-67 and claim 16).

Schalkammer et al. teaches a composition, wherein the biomolecule comprises a lipid (Column 3, lines 63-67 and claim 16).

Schalkammer et al. teaches a composition, wherein the biomolecule comprises a sugar moiety (Column 5, lines 1-4).

Schalkammer et al. teaches a composition , wherein the distance of the metal particle from the biomolecule is less than 10 nm (Column 4, lines 46-52 and Figures 1-4) which is equal to less than 100 Angstrom but falls in the range of about 50 Angstrom and therefore meets the requirement of the claim 10.

Schalkammer et al. teaches a composition, wherein the metal particle comprises a noble metal selected from silver and gold (Column 3, lines 33-45 and Claim 14).

Schalkammer et al. teaches a composition, wherein the metal particle is sub-wavelength in size (Column 3, lines 55-62 and Claim 15).

Schalkammer et al. teaches a composition, wherein the biomolecule is linked to the metal particle (Column 4, lines 32-45 and Claim 3).

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Schalkhammer et al teaches a microarray system comprising:

a solid support, wherein the solid support is coated with metal particles (Figures 1-4); and

a matrix having an array of biomolecules attached to the support such that when a labeled probe hybridizes to the biomolecules, the fluorescence of the labeled probe increases in response to an amount of exciting radiation (Figures 1-4 and Claims 1-2).

Schalkammer et al. teaches a composition of matter comprising: a biomolecule in combination with a metal surface, wherein the metal surface and the biomolecule are positioned at a distance apart sufficient to adjust intrinsic emission of electromagnetic radiation from the biomolecule in response to an amount of exciting electromagnetic radiation (Abstract, Figures 1-4 and Column 1, lines 7-25, and Column 3, line 4 to Column 5, line 4 and Claims 3-18).

### *Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Chakrabarti, Ph.D., whose telephone number is (703) 306-5818. The examiner can normally be reached on 7:00 AM-4:30 PM from Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (703) 308-1119. The fax phone number for this Group is (703) 305-7401. Analyst of this Group Chantae Dessau can be reached at (703)605-1237.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Arun Chakrabarti,

*Arun K. Chakrabarti*  
ARUN K. CHAKRABARTI  
PATENT EXAMINER

Patent Examiner,

March 24, 2003